



PUMA V400P

High Productivity Vertical Turning Center



Doosan Machine Tools

Optimal Solutions for the Future

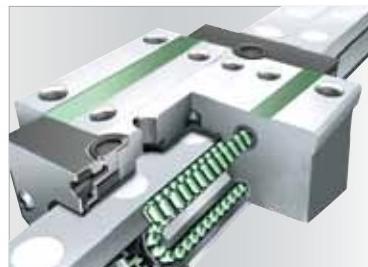
PUMA V400P

PUMA V400P is vertical turning center that has maximized productivity & serviceability, using roller type LM guide for all axis, so increased rapid traverse, acceleration and deceleration.

Rigid structure for improving productivity



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Roller type LM guide and upgraded servo motor, based on meehanite cast iron bed with rigid heavy-rib structure, optimized for improving productivity

Rapid Traverse (X / Z axis)

24 m/min

Power of axis motor

X axis **3 kW**
(4.0 Hp)

Z axis **7 kW**
(9.4 Hp)

The result of increasing productivity



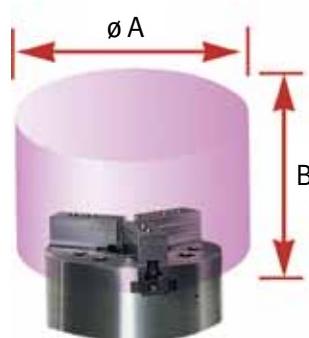
Machining time for brake disc

| | |
|-------------------|----------------|
| Previous model | 43.54 s |
| PUMA V400P | 39.36 s |

Productivity
10 %▲
increase

* Test result by own standard.

Machining range



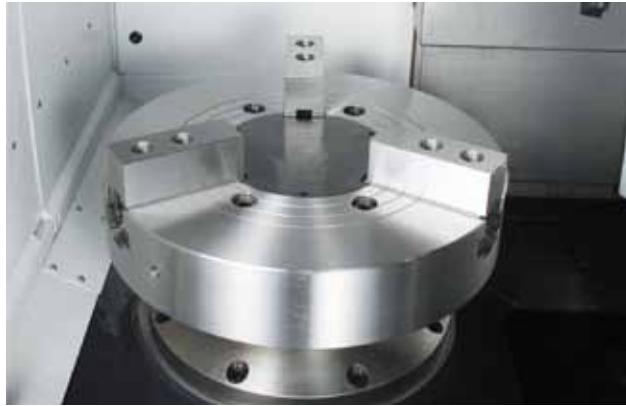
A : Max. turning diameter

496 mm
(19.5 inch)

B : Max. turning length

461 mm
(18.1 inch)

Main Spindle



The cartridge type spindle with A2#8 spindle nose assures high capability and easy of maintenance. Especially rigid coupled bearing assembly is to support heavy weight workpiece and reduces thermal growth in long run operation.

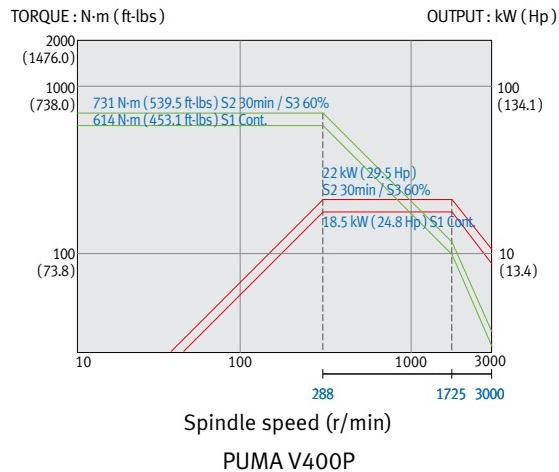
Max. spindle speed

3000 r/min

Spindle motor power (30 min)

22 kW (29.5 Hp)

Spindle power-torque diagram



Turret



Index time
(1-station swivel)

0.15 s

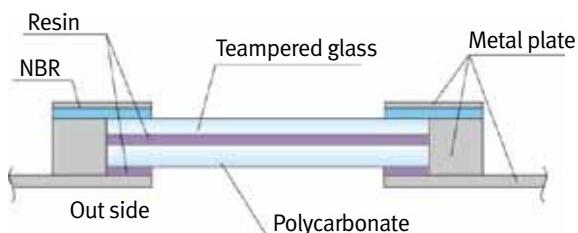
No. of tool station

12 ea

The large 12 station heavy duty turret features a large diameter Curvic coupling and heavy duty design with unsurpassed rigidity. Turret rotation, acceleration and deceleration are all controlled by a reliable high torque servo motor.

Unclamp and rotation are virtually simultaneous. Its fast index response reduces the total cycle time Double-

Safety Design



The operator safety can be enhanced through the front door with its shock absorbing laminated glass and double panel construction. The windows without grating also provide a clear view of the machine inside.

Machine Specification

| | Feature | Unit | PUMA V400P |
|--------------------|--|-----------|--|
| Capacity | Swing over bed | mm (inch) | 610 (24.0) |
| | Swing over saddle | mm (inch) | 500 (19.7) |
| | Recom. Turning diameter | mm (inch) | 305 (12.0) |
| | Max. Turning diameter | mm (inch) | 496 (19.5) |
| | Max. Turning length | mm (inch) | 461 (18.1) |
| | Chuck size | mm (inch) | 305 (12) |
| Travels | Travel distance | X-axis | 268 (10.6) |
| | | Z-axis | 488 (19.2) |
| Feedrates | Rapid Traverse Rate | X-axis | 24 (0.9) |
| | | Z-axis | 24 (0.9) |
| Main spindle | Max. Spindle speed | r/min | 3000 |
| | Spindle nose | ASA | A2-8 |
| | Spindle bearing diameter (Front) | mm (inch) | 130 (5.1) |
| | Spindle through hole | mm (inch) | 90 (3.5) |
| Turret | No. of tool stations | ea | 12 |
| | OD tool size | mm (inch) | 25 x 25 (1.0 x 1.0) |
| | Max. boring bar size | mm (inch) | 50 (2.0) |
| | Turret Indexing time (1 station swivel) | s | 0.15 |
| Motors | Main spindle motor power (30min./ cont.) | kW (Hp) | 22 / 18.5 (29.5 / 24.8) |
| | Coolant pump motor power | kW (Hp) | 0.4 / 0.9* / 1.5* / 2.2* / 3.7* / 5.5* / 7.5* (0.5* / 1.2* / 2.0* / 3.0* / 5.0* / 7.4* / 10.1*) |
| Power source | Electric power supply (rated capacity) | kVA | 42.2 |
| Machine Dimensions | Length | mm (inch) | 1455 (57.3) |
| | Width | mm (inch) | 2075 (81.7) |
| | Height | mm (inch) | 3210 (126.4) |
| | Weight | kg (lb) | 6000 (13227.5) |
| NC system | | | DOOSAN-FANUC i |

* options

Standard Feature

- Coolant supply equipment
- Full enclosure chip and coolant shield
- Hand tool kit, including small hand tool for operations
- Hydraulic chuck & actuating cylinder
- Hydraulic power unit
- Leveling jack screw & plates
- Lubrication equipment
- Soft jaws (total)
- Standard tooling kit (tool holders & boring sleeve)
- Work light

Optional Feature

- Air blast for chuck jaw cleaning
- Automatic door
- Automatic door with safety device
- Chip conveyor & Chip bucket
- Coolant flushing
- Dual chucking pressure
- Hardened & ground jaws
- Manual tool presetter
- Oil skimmer
- Signal tower (yellow, red, green)
- Proximity switch for chuck clamp detection
- Special chucks



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- The specifications and information above-mentioned may be changed without prior notice.
- For more details, please contact Doosan.

